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EXAMINER

DIVECHA, KAMAL B

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,562

Applicant(s)

DOYLE ET AL.

Examiner

KAMAL B. DIVECHA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45-100 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 45-100 is/are rejected.
- 7) ☒ Claim(s) 48 and 58 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 48 and 58 are objected to because of the following informalities: the said “the method according to claim 47” of claim 48 was intended to be “the method according to claim 46” and said “the method according to claim 57” of claim 58 was intended to be “the method according to claim 45”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 74-81 and 86 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Regarding claim 74, applicant discloses the phrases “deployment” and “deploying” that are unclear to the examiner. Does the applicant mean storing, saving, transmitting, placing, adding etc.
- Claims 75-81 are rejected for the same reasons as claim 74 due to their dependency.
- Regarding claim 72, the phrase "may operate" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

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- Furthermore, claim 81 is generally narrative and indefinite, failing to conform with current U.S. practice. The limitation disclosed in the claim is unclear to the examiner.
- Claim 86 is rejected for the same reasons as claim 74 above.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 45-49, 51, 55, 56, 60, 61, 65-67, 70-72, 74-77, 80, 82-94 and 96-99 are rejected under 35 U.S.C. 102(e) as being anticipated by Hu (U.S. Patent No. 6,173,322 B1).

Hu discloses:

As per claim 45, A method of serving objects in a computing network, the method comprising: receiving a request for an object stored on an intelligent storage system (fig. 4 block #404 and fig. 2 block #202); and evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request (fig. 6 block #204 and step #602, 604; col. 7 L53-61; col. 5 L55-67).

As per claim 46, the method as in Claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of

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the received request comprises: serving the stored object through the recipient of the received request when the selected criteria are not met (fig. 2 block #216, #202, #104 and col. 5 L60-67; col. 12 L66-67 to col. 13 L1-5); and informing a sender of the received request that a subsequent connection should be established for serving the stored object when the selected criteria are met (col. 6 L14-22; col. 13 L45-47; col. 12 L43-48).

As per claim 47, the method as in claim 46, wherein the subsequent connection bypasses the recipient of the received request (read as bypassing network request manager serving as a proxy; col. 12 L35-52).

As per claim 48, the method according to claim 46, wherein informing a sender of the received request that a subsequent connection should be established for serving the stored object when the selected criteria are met uses a redirect code of an existing protocol (col. 11 L17-34 and col. 3 L8-10).

As per claim 49, the method as in Claim 48, wherein the existing protocol is Hypertext Transfer Protocol (col. 5 L29-34; col. 6 L60-61).

As per claim 51, the method as in claim 48, further comprising requesting establishment of the subsequent connection automatically in response to the redirect code (col. 12 L35-40).

As per claim 53, the method as in Claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request comprises comparing a size of the stored object to a statically-specified number (col. 10 L1-9; col. 8 L26-38 and fig. 6 step#602).

As per claim 54, the method as in claim 53, wherein the statically-specified number is specified by an administrator using a configuration interface (col. 7 L60-62).

As per claim 55, the method as in Claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request comprises comparing a size of the stored object to a dynamically-determined number (fig. 6 block #204 and step #602, 604; col. 7 L53-61; col. 5 L55-67 and col. 10 L1-5).

As per claim 56, the method according to Claim 55, wherein the dynamically-determined number is determined in view of current network conditions (col. 9 L7-65).

As per claim 60, the method according to Claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request comprises determining whether a naming extension matches an element in a set of dynamically-determined set of naming extensions (fig. 7 block #702 and fig. 6 step #602 and col. 8 L26-38).

As per claim 61, the method as in claim 60, wherein the dynamically-determined set of naming extensions is determined in view of current network conditions (col. 9 L7-65).

As per claim 63, the method as in claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request comprises determining whether an object name matches an element in a statically-specified set of object names (fig. 7 block #702 and fig. 6 step #602 and col. 8 L26-38).

As per claim 64, the method as in claim 63 wherein the statically-specified set of object names is specified by an administrator using a configuration interface (col. 7 L60-64).

As per claim 65, the method as in claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request comprises determining whether an object name matches an element in a set of dynamically-determined set of object names (fig. 7 block #702 and fig. 6 step #602 and col. 8 L26-38).

As per claim 66, the method as in claim 65, wherein the dynamically-determined set of object names is determined in view of current network conditions (col. 9 L7-65).

As per claim 67, the method according to Claim 45, wherein the predetermined criteria comprises a content type of the stored object (col. 13 L5-10).

As per claim 68, the method as in claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request comprises determining whether a content type matches an element in a statically-specified set of content types (fig. 7 block #702 and fig. 6 step #602 and col. 8 L26-38).

As per claim 69, the method as in claim 68, wherein the statically-specified set of content types is specified by an administrator using a configuration interface (col. 7 L53-62; col. 8 L42-59).

As per claim 70, the method as in claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request comprises determining whether a content type matches an element in a set of dynamically-determined set of content types (fig. 7 block #702 and fig. 6 step #602 and col. 8 L26-38).

As per claim 71, the method as in claim 70, wherein the dynamically-determined set of content types is determined in view of current network conditions (col. 9 L7-65).

As per claim 72, the method as in claim 45, wherein the predetermined criteria comprises using one or more wildcards which may operate to match more than one stored object (col. 6 L53-61).

As per claim 74, A method of deploying objects, the method comprising: receiving a deployment request for a particular object (col. 5 L29-34; col. 18 L29); deploying the particular object on an intelligent storage system (col. 13 L3-21; col. 18 L40-41); evaluating characteristics of the particular object (col. 6 L62-67 and col. 8 L8-10; col. 18 L30-31); creating a redirect link on one or more servers from which the particular object may be requested if the evaluated characteristics of the particular object meet predetermined criteria (col. 5 L41-47 and col. 12 L43-52); and creating an object serving link on the one or more servers if the evaluated characteristics of the particular object do not meet the predefined criteria (col. 6 L43-61 and col. 11 L45-59).

As per claim 75, the method as in claim 74, wherein the redirect link enables returning a redirect status code to a requester of the object (col. 12 L43-52).

As per claim 76, the method according to Claim 75, further comprising requesting establishment of a subsequent connection automatically in response to receiving the redirect status code for retrieving the particular object directly from the intelligent storage system (col. 12 L35-40 and col. 18 L47-51).

As per claim 77, the method as in claim 75, wherein contents of the redirect link are programmatically created (col. 5 L20-22 and L40-47).

As per claim 80, A method of serving large objects, the method comprising: receiving a deployment request for a particular object (col. 5 L29-34; col. 18 L29); deploying the particular object on an intelligent storage system (col. 13 L3-21; col. 18 L40-41); creating a redirect Link on one or more servers from which the particular object may be requested (col. 5 L41-47 and col. 12 L43-52); creating an object serving Link on the one or more servers (col. 6 L43-49 and col. 18 L37-39); and serving the particular object directly from the intelligent storage system using the redirect Link **or** through a selected one of the servers using the object serving Link (col. 5 L55-67 and col. 16 L65-67 to col. 17 L1-5; col. 6 L17-22).

As per claim 91, Hu further discloses the computer program product as in claim 88, wherein the predetermined criteria **is selected from one** of a size of the stored object, a naming extension of the stored object, a name of the stored object, and a **content type** (read as type of data) of stored object (col. 13 L3-10).

As per claim 92, Hu further discloses the computer program product of claim 91, wherein predetermined criteria are statically-specified (col. 13 L3-21).

As per claim 93, Hu further discloses the computer program product of claim 91, wherein the predetermined criteria are dynamically-determined (col. 13 L1-21).

As per claims 82-90, 94 and 96-99, they do not teach or further define over the limitations in claims 45-49, 51, 55, 56, 60, 61, 65-67, 70-72, 74-77 and 80. Therefore, claims 82-90, 94 and 96-99 are rejected for the same reasons set forth in claims 45-49, 51, 55, 56, 60, 61, 65-67, 70-72, 74-77 and 80.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 78 is rejected under 35 U.S.C. 103(a) as being obvious over Hu (U.S. Patent No. 6,173,322 B1).

Hu discloses all the limitations of claim 75 and 77 as set forth above.

However, Hu does not explicitly disclose the method as in claim 75, wherein the contents of the redirect link are manually created, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to create the contents of the redirect link manually because it would have reduced all kinds of related costs (software development costs).

7. Claim 50 is rejected under 35 U.S.C. 103(a) as being obvious over Hu (U.S. Patent No. 6,173,322 B1) in view of Dillon et al (U.S. Patent No. 6,658,463 B1).

Hu discloses all the limitations of claims 48, 46 and 45 set forth above.

However, Hu does not explicitly disclose the method as in claim 48, wherein the existing protocol is wireless session protocol.

Dillon et al explicitly discloses a satellite communications network including an upstream proxy server and two reporting downstream proxy servers wherein communication takes place through a wireless satellite link using wireless session protocol (fig. 7 and col. 12 L52-58).

At the time of the invention it would have been obvious to a person of ordinary skilled in the art to incorporate the teaching of Dillon et al as stated above with the system and method for the distribution of client requests of Hu in order to enable wireless communications between the systems.

The motivation for doing so would have been because satellite communications networks would have outbound and inbound channel with high-speed and continuous channel carrying packetized data thus improving the transmission efficiency (Dillon et al, col. 1 L15-21; col. 3 L38-57).

8. Claims 53 and 54 are rejected under 35 U.S.C. 103(a) as being obvious over Hu (U.S. Patent No. 6,173,322 B1) in view of Balick et al. (U.S. Patent No. 5,802,291).

Hu discloses all the limitations as set forth in claim 45 above.

However, Hu does not explicitly disclose:

As per claim 53, the method as in claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of

the received request comprises comparing a size of the stored object to a statically-specified number.

Balick et al. explicitly discloses a networked computer system containing a number of host computers with servers that provide various functionality to distributed clients on the network. Balick further teaches comparing a file size to the file size limit (figure 4 step #405).

At the time of the invention it would have been obvious to a person of ordinary skilled in the art to incorporate the teaching of Balick as stated above with the system and method of Hu in order to compare the file size.

One of ordinary skilled in the art would have been motivated to do because it would have evaluated the rule and it would have triggered an action (such as redirect or serve object from cache) based on the evaluated statement or rule.

As per claim 54, the method as in claim 53, wherein the statically-specified number is specified by an administrator using a configuration interface.

Balick et al explicitly discloses a networked computer system containing a number of host computers with servers that provide various functionality to distributed clients on the network. Balick further includes a means (server spy) for providing a system administrator the ability to specify a number of log files that can be swapped on rotating basis (col. 13 L39-49).

At the time of the invention it would have been obvious to a person of ordinary skilled in the art to incorporate the teaching of Balick as stated above with the system and method of Hu in order for the administrator to specify a number.

One of ordinary skilled in the art would have motivated because it would have enabled system administrator or a user to diagnose and solve problems occurring in the network. It also

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enables obtaining and modifying administrative information and behavior of server processes for analyzing and evaluation purposes (Balick et al., col. 1 L33-42 and col. 2 L27-47, L66-67-col. 3 L1-3).

9. Claims 52, 57 and 62 are rejected under 35 U.S.C. 103(a) as being obvious over Hu (U.S. Patent No. 6,173,322 B1) in view of "Official Notice".

Hu discloses all the limitations of claim 45.

Hu does not explicitly disclose:

As per claim 52, the method as in claim 45, wherein the predetermined criteria comprises a size of the stored object.

As per claim 57, the method as in claim 45, wherein the predetermined criteria comprises a naming extension of the stored object.

As per claim 62, the method as in claim 45, wherein the predetermined criteria comprises a name of the stored object.

But, at the time of the invention it would have been obvious to a person of ordinary skill in the art to address the following i.e. size, name and extension of the object, in a criterion list.

The motivation for doing so would have been because the criteria set forth above would have enabled efficient filtering capabilities, which would have resulted in a robust decision making process.

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10. Claims 58, 59, 63, 64, 68 and 69 are rejected under 35 U.S.C. 103(a) as being obvious over Hu (U.S. Patent No. 6,173,322 B1) in view of “official notice” and further in view of Abraham et al. (U.S. Patent No. 5,983,270).

Hu discloses all the limitations of claim 45 as set forth above.

However, Hu does not explicitly disclose:

As per claim 58, the method as in claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request comprises determining whether a naming extension matches an element in a statically-specified set of naming extensions.

As per claim 68, the method as in claim 45, wherein evaluating predetermined criteria to see if the stored object should be served from the intelligent storage system through a recipient of the received request comprises determining whether a content type matches an element in a statically-specified set of content types.

Abraham et al explicitly discloses a method and apparatus for managing Internet work and Intranetwork activity. Abraham et al further discloses graphical user interface for inputting vital information, mapping information and policies to be applied against users and a filter executive coupled to a filter engine that filters all outbound data packets (figure 4). The filter engine compares the outbound data packet to each rule in the user rule set. The IP packet is compared against the file type deny rule (col. 45 L1-17). He further teaches the limitation of comparing a file extension against those file extensions listed in the file type deny rule by the administrator (col. 45 L17-30).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Abraham et al as stated above with the system and method of Hu in order to compare a variable against a set of variables.

One of ordinary skill in the art would have been motivated so that the requests or packets are filtered according to most recent mapping information, which would have resulted in an robust and efficient decision, and further would have controlled the network congestion and decreased network latency.

As per claim 59 and 69, Abraham et al further discloses the GUI where system administrator are enabled to specify file type policy by identifying file extensions (col. 11 L26-51).

It would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Abraham et al as stated above with the system and method of Hu for specifying parameters using a user interface.

The motivation for doing so would have been the same as set stated above for claims 58 and 68.

As per claims 63 and 64, they do not teach or further define over the limitations in the claims 58, 59, 68 and 69. Therefore, claims 63 and 64 are rejected for the same reasons set forth in claims 58, 59, 68 and 69.

11. Claims 73, 79 and 95 are rejected under 35 U.S.C. 103(a) as being obvious over Hu (U.S. Patent No. 6,173,322 B1) in view of Hubbard (US 2002/0013832 A1).

Hu discloses the limitations of claim 45 as set forth above.

As per claim 73, Hu does not explicitly disclose the method as in claim 45, wherein the intelligent storage system comprises network-attached storage.

Hubbard explicitly discloses software-based network attached storage (NAS) services hosted on a massively distributed computing system (see abstract).

At the time of the invention it would have been obvious to a person of ordinary skilled in the art to incorporate the teaching of the Hubbard as stated above with the system and method of Hu for the purpose of obtaining network-attached storage system.

One of ordinary skilled in the art would have motivated to do so because storage priority controls would have utilized to facilitate the full use of available storage resources, such as user specified constraints (Hubbard: see abstract).

As per claims 79 and 95, they do not teach or further define over the limitations in claim 73. Therefore, claims 79 and 95 are rejected for the same reasons set forth in claim 73.

12. Claim 81 is rejected under 35 U.S.C. 103(a) as being obvious over Hu (U.S. Patent No. 6,173,322 B1).

Hu discloses all the limitations of claim 80 as set forth above.

However, Hu does not explicitly disclose the method as in claim 80, wherein serving the particular object directly from the intelligent storage system using the redirect Link or through a selected one of the servers using the object serving Link comprises delaying until run-time a decision on whether to serve the particular object directly from the intelligent storage system using the redirect Link or through a selected one of the servers using the object serving link, But it would have been obvious to one of having ordinary skill in the art at the time the invention was

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made to delay the transmission or serving of content until executing a decision on whether to serve the particular object directly from the intelligent storage system using the redirect Link or through a selected one of the servers using the object serving link because this would have avoided the network congestion in the network.

As per claim 100, it does not teach or further define over the claim 81. Therefore, claim 100 is rejected for the same reasons set forth in claim 81.

Additional References

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Goldman U.S. Patent No. 6,611,866 B1
- b. Chow et al., U.S. Patent No. 6,029,175
- c. Hinrichs et al., U.S. Patent No. 6,026,431


Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on 9.00am-5.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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ZARNI MAUNG
PRIMARY EXAMINER